Claims

1. A system with alternative processing tracks for further processing of products (02), having a shunt (34), at which a conveying track (33) is split into a plurality of alternative transport tracks (36, 37) for further processing of the products (02) in processing stages (01), wherein a sensor (39) which detects the product phase relation is arranged upstream of the shunt (34) and whose signal acts via a control device (41) on a drive mechanism (42) actuating the shunt (34), and wherein a further sensor (18) is respectively arranged on at least two transport tracks (36, 37), characterized in that the further sensor (18) is embodied as a sensor (18) which detects the product phase relation and that the sensor (18) is connected via a control device (10, 19) with a drive mechanism (05, 16), which is mechanically independent from the drive mechanism of the transport tracks (33, 36, 37) of the processing stage (01) and which controls the drive mechanism (05, 16) while taking the detected product phase relationship into consideration.

2. The system in accordance with claim 1, characterized in that the processing stage (01) is embodied as a longitudinal folding apparatus (01).

3. A longitudinal folding apparatus (01), to which a product (02) can be supplied over a transport track (36, 37), wherein a sensor (18) is arranged on the transport track (36, 37) upstream of the longitudinal folding apparatus (01), characterized in that the sensor (18) is embodied as a sensor (18) which detects

the product phase relation and that the sensor (18) is connected via a control device (10, 19) with a drive mechanism (05, 16), which is mechanically independent from the drive mechanism of the transport tracks (33, 36, 37) of the processing stage (01) and which controls the drive mechanism (05, 16) while taking the detected product phase relationship into consideration.

4. The system in accordance with claim 2 or the longitudinal folding apparatus (01) in accordance with claim 3, characterized in that the drive mechanism (05, 16) which is independent of the drive mechanism of the transport tracks (33, 36, 37) is embodied as the drive mechanism (05) of a folding blade (03) of the longitudinal folding apparatus (01).

5. The system or the longitudinal folding apparatus (01) in accordance with claim 4, characterized in that the folding blade (03) is embodied as a blade (03) which can be raised and lowered relative to the folding table (04).

6. The system or the longitudinal folding apparatus (01) in accordance with claim 5, characterized in that the blade (03) is seated on at least one lever, which can be pivoted in respect to a folding table (04).

7. The system in accordance with claim 2 or the longitudinal folding apparatus (01) in accordance with claim 3, characterized in that the longitudinal folding apparatus (01) has a movable buffer (13, 14), which slows down a product (02) entering the longitudinal folding apparatus.

8. The system or the longitudinal folding apparatus (01) in accordance with claim 7, characterized in that the buffer (13, 14) can be moved along the braking path (24) of the printed products (02, 22) at a lesser speed than the entry speed (v_0).

9. The system or the longitudinal folding apparatus (01) in accordance with claim 7, characterized in that the drive mechanism (16) which is mechanically independent of the drive mechanism of the transport tracks (33, 36, 37) is embodied as the drive mechanism (16) of the buffer (13, 14).

10. The system or the longitudinal folding apparatus (01) in accordance with claim 9 and 4, characterized in that the drive mechanism (05) of the folding blade (03), as well as the drive mechanism (16) of the buffer (13, 14), are controlled by employing the signal from the sensor (18).

11. The system or the longitudinal folding apparatus (01) in accordance with claim 7, characterized in that the movable buffer (13, 14) is arranged on an endless belt (12) running on the circumference of a rotatable body (15) which extends at least by a section into the braking path (24).

12. The system or the longitudinal folding apparatus (01) in accordance with claim 7, characterized in that the movable buffer (13, 14) is arranged on a moving endless belt (12) having a section which extends parallel with the braking path (24).

13. The longitudinal folding apparatus (01) in accordance with claim 3, characterized in that a shunt (34) is arranged

upstream of the longitudinal folding apparatus (01), by means of which the products (02) can be alternatively supplied to the longitudinal folding apparatus (01) or another processing stage (01).

14. The longitudinal folding apparatus (01) in accordance with claim 13, characterized in that a sensor (39), which detects the product phase relationship, is arranged upstream of the shunt (34), whose signal acts via a control device (41) on a drive mechanism (42) which actuates the shunt (34).

15. The system in accordance with claim 1 or the longitudinal folding apparatus (01) in accordance with claim 14, characterized in that the control device (41) is designed for synchronizing an operating position of the shunt (34) with the detected product phase relationship by employing the signal from the sensor (39).

16. The system or the longitudinal folding apparatus (01) in accordance with claim 4, characterized in that the control device (10, 19) is designed for synchronizing the movement of the folding blade (03) with the detected product phase relationship by employing the signal from the sensor (18).

17. The system or the longitudinal folding apparatus (01) in accordance with claim 7, characterized in that the control device (10, 19) is designed for synchronizing the movement of the buffer (13, 14) with the product phase relationship by employing the signal from the sensor (18).

18. A method for the synchronous operation of a folding apparatus with alternative processing paths, wherein

- a product phase relationship is determined by means of a sensor (39) arranged upstream of a shunt (34),
- by means of standard fixed for the production, the product flow is conducted by means of the shunt (34) into a selected processing path or is split into several processing paths,
- in that an operating position of the shunt (34) is synchronized with the product phase relationship on the basis of the signals from the sensor (39),
- a product phase relationship is determined prior to or at the time of entry into the processing stage (01) by means of a second sensor (39), which is arranged downstream of the shunt (34) and upstream of a processing stage (01),
- and the movement of a tool (03) of the processing stage (01) is synchronized with the product phase relationship by a second control device (19) on the basis of the signals from the second sensor (18).

19. The method in accordance with claim 18, characterized in that the synchronization of the operating position of the shunt (34) with the product phase relationship takes place by means of a first control device (42).

20. The method in accordance with claim 18, characterized in that the synchronization of the movement of the tool (03) with the product phase relationship takes place by means of a second control device (10, 19).